

13. A lateral semiconductor device comprising:

- a support substrate,
- a buried insulating film formed on said support substrate,
- a first conductivity type semiconductor layer formed on said buried insulating film,
- a second conductivity type well region formed on the surface of said semiconductor layer,
- a first conductivity type second semiconductor region formed so as to be adjacent to or away from said well region in said semiconductor layer,
- a first conductivity type source region formed on the surface of said well region,
- a first conductivity type drain region formed on the surface of said second semiconductor region,
- a gate insulating film formed between an end of said source region and an end of said well region, and
- a gate electrode formed on said gate insulating film, wherein
- a second conductivity type buried region is provided in the semiconductor layer under said source region, and the diffusion constant of the second conductivity type impurity in said buried region is smaller than the diffusion constant of the second conductivity type impurity in said well region.

14. A lateral semiconductor device comprising:

- a support substrate,
- a buried insulating film formed on said support substrate,
- a second conductivity type semiconductor layer formed on said buried insulating film,
- a second conductivity type well region formed on the surface of said semiconductor layer,
- a first conductivity type second semiconductor region formed so as to be adjacent to or away from said well region in said semiconductor layer,
- a first conductivity type source region formed on the surface of said well region,
- a first conductivity type drain region formed on the surface of said second semiconductor region,

- a gate insulating film formed between an end of said source region and an end of said second semiconductor region, and

- a gate electrode formed on said gate insulating film, wherein

- a second conductivity type buried region is provided in the semiconductor layer under said source region, and the diffusion constant of the second conductivity type impurity in said buried region is smaller than the diffusion constant of the second conductivity type impurity in said well region.

15. A lateral semiconductor device in accordance with claim 13, wherein said buried region is extended from under said source region to the drain side.

16. A lateral semiconductor device in accordance with claim 14, wherein said buried region is extended from under said source region to the drain side.

17. A lateral semiconductor device in accordance with claim 13, wherein the impurity in said buried region is antimony or arsenic, and the impurity in said well region is phosphorus.

18. A lateral semiconductor device in accordance with claim 14, wherein the impurity in said buried region is antimony or arsenic, and the impurity in said well region is phosphorus.

19. A lateral semiconductor device producing method comprising:

- a step of forming a mask layer on a first or second conductivity type semiconductor layer formed above a support substrate on buried insulating film,

- a step of forming a buried region in said semiconductor layer by carrying out ion implantation of a second conductivity type first impurity using said mask layer as a mask,

- a step of carrying out ion implantation of a second impurity having a diffusion constant larger than that of said first impurity using said mask layer as a mask,

- a step of eliminating said mask layer and carrying out epitaxial growth on the surface of said semiconductor layer, and

- a step of forming a well region by extending said second impurity to the surface of said semiconductor layer by heat treatment.

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